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EXAMINER

TRAN, TRANG U

ART UNIT PAPER NUMBER

2614

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/966,038

Applicant(s)

BELLERS, ERWIN B.

Examiner

Trang U. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6-9,11,13-16,18 and 20 is/are rejected.
- 7) ☒ Claim(s) 3, 5, 10, 12, 17 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed Feb. 09, 2005 have been fully considered but they are not persuasive.

In re pages 13-14, applicant argues, with respect to claims 1, 8 and 15, that newly added limitation that the variable sampling rate is selectable over a continuous range as a function of the highest spatial frequency within the image content is clearly distinguishable over, and is in fact a substantial improvement over, the simple two-level system as disclosed in Cherry.

In response, the examiner respectfully disagrees. Cherry et al discloses in col. 4, lines 12-19 that

"During periods when picture areas of low-detail are being scanned, the resultant low-detail signals have a small short-term bandwidth. For picture areas of high detail, the corresponding high-detail signal from the scanner may be of several megacycles bandwidth. For the purpose of the embodiments herein, it is assumed that the picture signal from scanner 1 is limited, by low-pass filter or otherwise, to 3mc./s. bandwidth"

and from col. 4, line 73 to col. 5, line 7 that

"From the high or low detail information supplied by the detail detector 3, a supply rate selector 4 determines the intervals at which the supply gate 16 shall be opened and the output of the supply rate selector 4 is a series of control pulses spaced at the required intervals for opening the supply gate 16.

For the high-detail condition, the highest supply rate is chosen, corresponding to the Nyquist sampling interval of 1/6 microsecond. For the low-detail condition, a lower supply rate is chosen."

From the above passages, it is clear that the variable sampling rate (supply rate selector 4) of Cherry et al is selectable over a continuous range (pictures areas) as a function of the highest spatial frequency within the image content (high-detail signal).

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Thus, Cherry et al does indeed disclose the newly added limitations in the amended claims 1, 8 and 15.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, 4, 7-9, 11, 14-16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipate by E. C. Cherry et al. (US Patent No. 3,324,237).

In considering claim 1, E. C. Cherry et al discloses all the claimed subject matter, note 1) the claimed an input receiving an analog video signal is met by the picture scanner 1 (Fig. 1, col. 4, lines 3-19), and 2) the claimed a sampling mechanism coupled the input and sampling the analog video signal utilizing variable sampling rate modulated for segments of the analog video signal based upon spatial frequencies within the image content contained within the analog video signal, said variable sampling rate being selectable over a continuous range as a function of a highest spatial frequency within the image content is met by the analog-to-digital converter 2, the detail detector 3 which supplies a two-level (high or low detail information) output signal, a supply rate selector 4 which selects variable sampling rate for the supply-rate coder 5 based upon spatial frequencies within the image content (high or low detail information) (Fig. 1, col. 4, line 20 to col. 5, line 65 and col. 8, line 13 to 12, line 50).

In considering claim 2, the claimed wherein first sampling rate is employed for a first segment of the analog video signal containing content having a first highest spatial frequency and a second sampling rate greater than the first sampling rate employed segment of the analog video signal containing content having a second highest spatial frequency greater than the first highest spatial frequency is met by the supply rate selector 4 which selects for the low-detail condition, a lower supply rate is chosen, for the high-detail condition (frequency greater than the low-detail), the highest supply rate is chosen, corresponding to the Nyquist sampling interval of 1/6 microsecond (Fig. 1, col. 4, line 20 to col. 5, line 65).

In considering claim 4, E. C. Cherry et al discloses all the claimed subject matter, note 1) the claimed wherein the sampling mechanism further comprises: a single analog-to-digital converter receiving the analog video signal and sampling the analog video signal at a fixed rate is met by the signal sampler and analogue-to-digital converter 1 (Figs. 1 and 3, col. 8, lines 13-48), 2) the claimed signal analysis unit analyzing samples from the converter to select sampling rate for and each segment of the analog video signal is met by the detail detector 3 and the supply rate selector 4 which selects for the low-detail condition, a lower supply rate is chosen, for the high-detail condition (frequency greater than the low-detail), the highest supply rate is chosen, corresponding to the Nyquist sampling interval of 1/6 microsecond (Fig. 1, col. 4, line 20 to col. 5, line 65 and col. 8, line 52 to col. 12, line 49), and 3) the claimed a downsampling unit retaining samples from the converter for each segment of the analog

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video signal based upon corresponding sampling rate selected by the signal analysis unit is met by the supply rate coder 5 (Fig. 1, col. 12, lines 53-75).

In considering claim 7, the claimed wherein the sampling mechanism samples the analog video signal at a first rate and transmits samples for at least one segment of the analog video signal at second rate different than the first rate is met by the signal sampler and analogue-to-digital converter 1 which samples the analog signal at a first rate and the supply rate coder 5 which transmits samples for at least one segment at second rate different than the first rate (Figs. 1 and 3, col. 8, lines 13-48 and col. 12, lines 53-75).

In considering claim 8, E. C. Cherry et al discloses all the claimed subject matter, note 1) the claimed an input receiving an analog video signal is met by is met by the picture scanner 1 (Fig. 1, col. 4, lines 3-19), 2) the claimed an output transmitting digital video signal to a display, a storage system, or another device is met by is met by the picture sample store 6 and 8 (Fig. 1, col. 13, line 5, line 66 to col. 7, line 10 and col. 13, line 23 to col. 14, line 37), and 3) the claimed a sampling mechanism coupled to the input and sampling the analog video signal utilizing a variable sampling rate modulated for segments of the analog video signal based upon spatial frequencies within the image content contained within the analog video signal, said variable sampling rate being selectable over a continuous range as a function of a highest spatial frequency within the image content is met by the analog-to-digital converter 2, the detail detector 3 which supplies a two-level (high or low detail information) output signal, a supply rate selector 4 which selects variable sampling rate for the supply-rate coder 5 based upon

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spatial frequencies within the image content (high or low detail information) (Fig. 1, col. 4, line 20 to col. 5, line 65 and col. 8, line 13 to 12, line 50).

Claim 9 is rejected for the same reason as discussed in claim 2.

Claim 11 is rejected for the same reason as discussed in claim 4.

Claim 14 is rejected for the same reason as discussed in claim 7.

Claims 15-16 are rejected for the same reason as discussed in claims 1-2, respectively.

Claim 18 is rejected for the same reason as discussed in claim 4.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6, 13 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over E. C. Cherry et al. (US Patent No. 3,324,237).

In considering claim 6, E. C. Cherry et al disclose all the limitations of the instant invention as discussed in claims 1 and 2, except for providing the claimed wherein the rate for each segment of the analog video signal sampling is at least twice a highest spatial frequency within content contained by the corresponding segment of the analog video signal. The capability of selecting the rate for each segment of the analog video signal sampling is at least twice a highest spatial frequency within content contained by the corresponding segment of the analog video signal is old and well known in the art.

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Therefore, the Official Notice is taken. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to incorporate the old and well known of selecting the rate for each segment of the analog video signal sampling is at least twice a highest spatial frequency within content contained by the corresponding segment of the analog video signal into E. C. Cherry et al's system in order to increase the quality of the video signal because sampling the video signal using at least twice a highest spatial frequency will reduce interference.

Claim 13 is rejected for the same reason as discussed in claim 6.

Claim 20 is rejected for the same reason as discussed in claim 6.

Allowable Subject Matter

6. Claims 3, 5, 10, 12, 17 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trang U. Tran whose telephone number is (571) 272-7358. The examiner can normally be reached on 8:00 AM - 5:30 PM, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TT TT
June 6, 2005


JOHN MILLER
SUPERVISORY PATENT EXAMINER
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